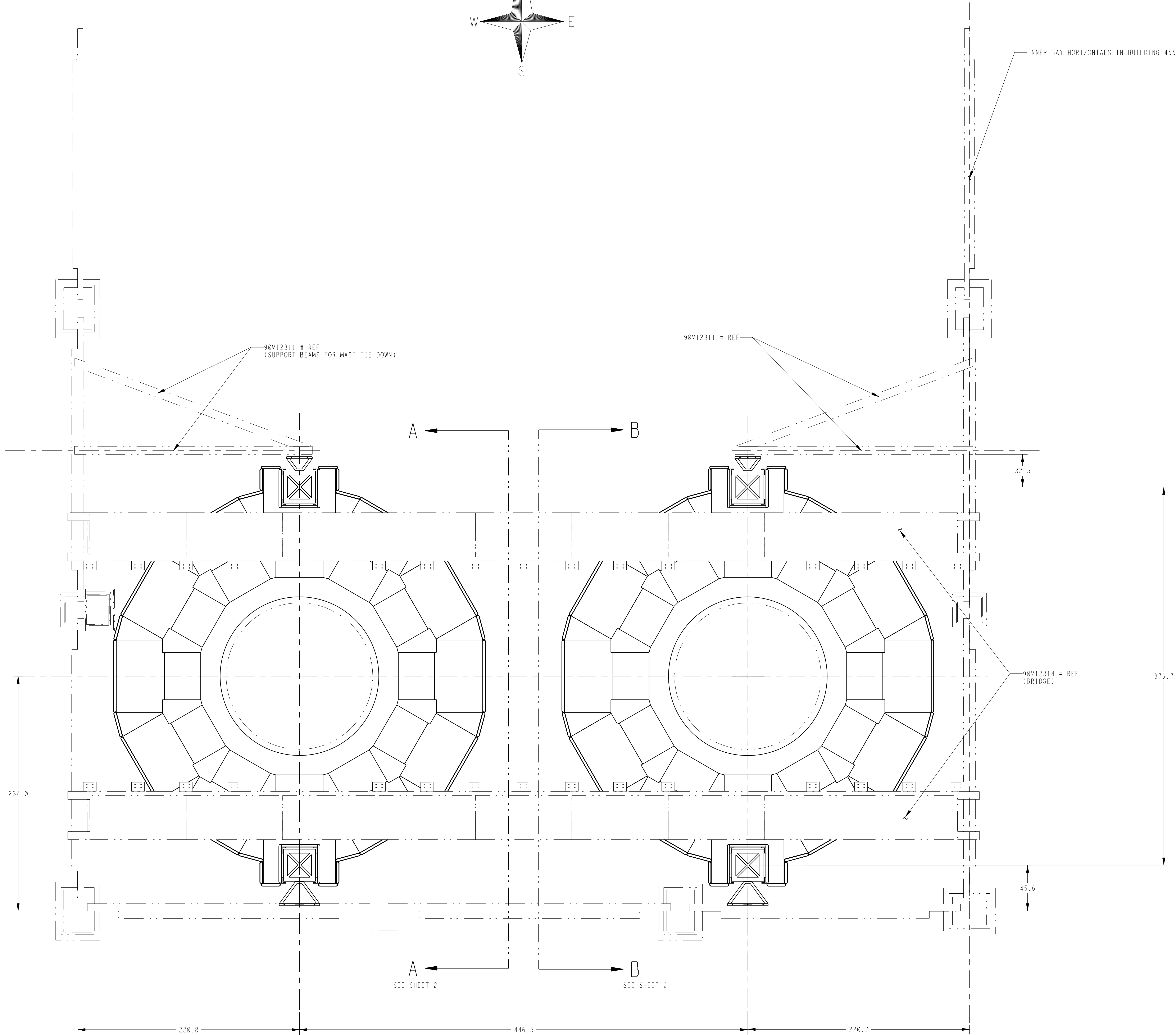
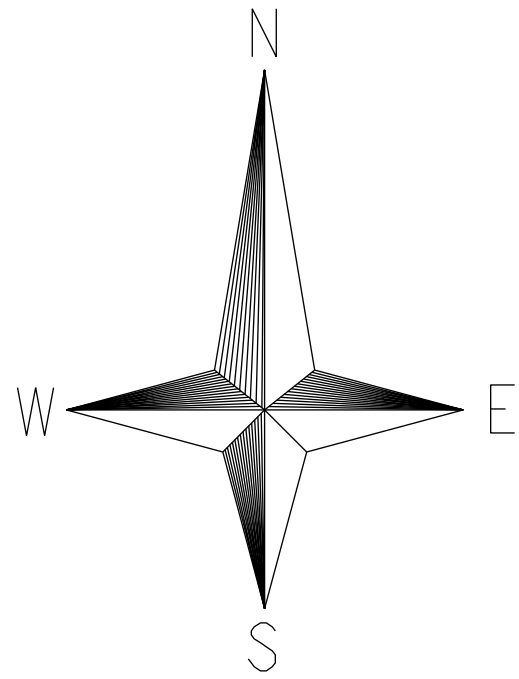


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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SPECIFICATION NOTES:

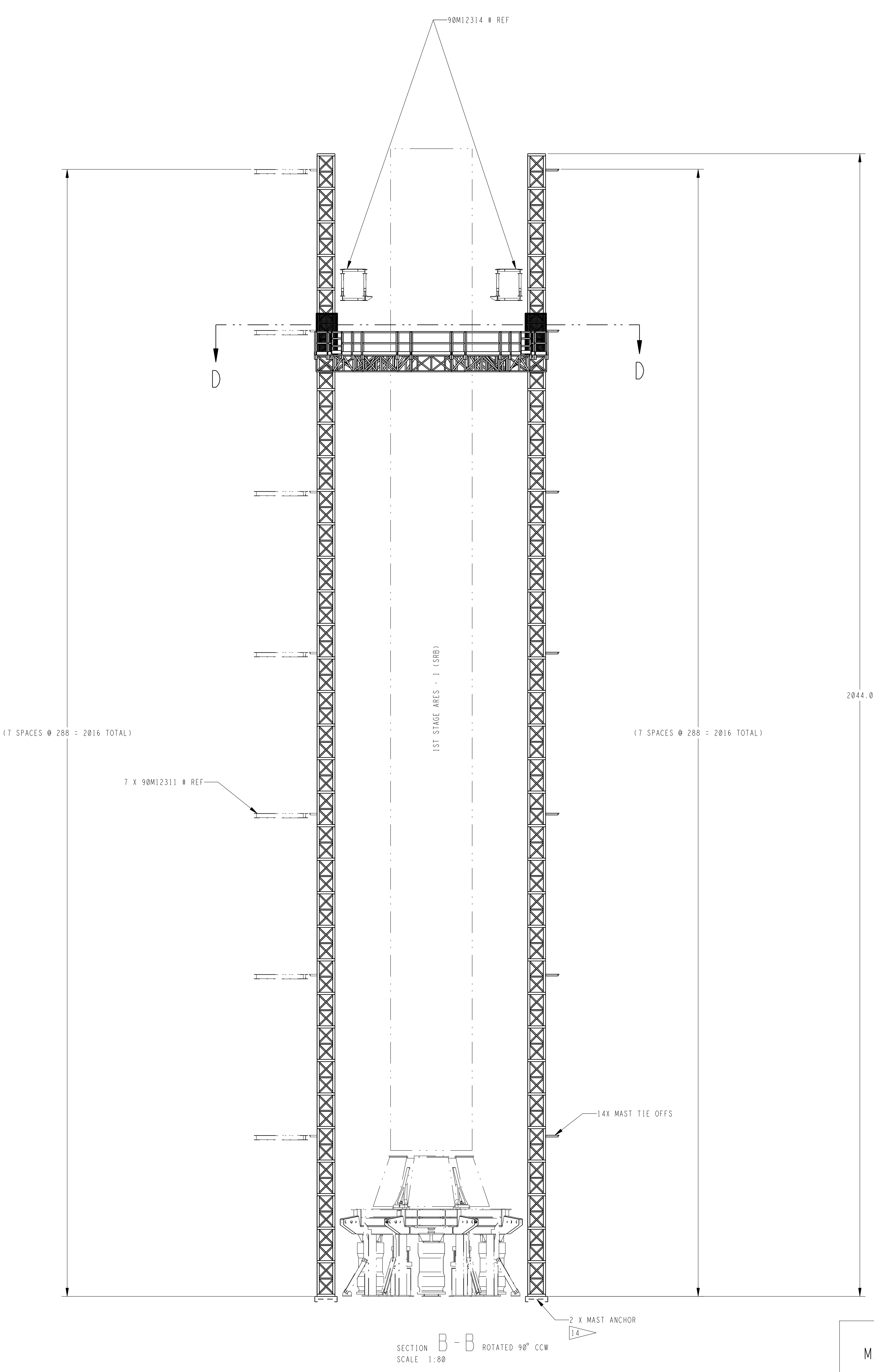
- MAST CLIMBERS SHALL BE DRIVEN BY ELECTRIC MOTORS.
- MAST CLIMBER PLATFORMS SHALL BE BRIDGED TOGETHER IN TWO TOWER CONFIGURATION.
- MAST CLIMBERS SHALL HAVE A SYNCHRONIZING / LEVELING MECHANISM BETWEEN THE TWO MOTORS IN TWO TOWER CONFIGURATION.
- MAST CLIMBERS SHALL HAVE AN EMERGENCY DESCENT MECHANISM IN CASE LOSS OF POWER.
- MAST CLIMBERS SHALL HAVE A VISIBLE & AUDIBLE ALARM WHILE IN MOTION.
- MAST CLIMBERS SHALL BE AUTOMATICALLY STOPPED IF PLATFORMS BECOME UNEVEN DURING OPERATION IN TWO TOWER CONFIGURATION.
- MAST CLIMBERS SHALL HAVE AN OVERLOAD SENSING DEVICE THAT WILL SHUT OFF THE MOTORS TO THE MAST CLIMBERS, IF MAXIMUM LOAD IS EXCEEDED.
- MAST CLIMBERS SHALL HAVE SAFETY CONTROLS FOR THE UPPER AND LOWER LIMIT OF TRAVEL.
- MAST CLIMBERS SHALL HAVE SAFETY FENCING AROUND THE MAST.
- MAST CLIMBERS SHALL HAVE THE FUNCTIONALITY OF BEING USED IN A SINGLE TOWER CONFIGURATION.
- MAST CLIMBERS WHEN BRIDGED TOGETHER SHALL BE ABLE TO BE CONTROLLED FROM ONE LOCATION.
- MAST CLIMBERS SHALL BE ABLE TO USE THE MAIN PLATFORM STRAIGHT EXTENSIONS FROM THE TWO TOWER CONFIGURATION IN A SINGLE TOWER CONFIGURATION.
- VENDOR SHALL PROVIDE MAXIMUM SPAN LENGTH IN ONE TOWER CONFIGURATION.
- MAST CLIMBERS SHALL BE ANCHORED TO CONCRETE FLOORING WITH VENDOR SUPPLIED HARDWARE.
- MAST CLIMBERS SHALL NOT NEED LATERAL STABILIZATION ANY MORE FREQUENTLY THAN 24 FT.
- VENDOR SHALL PROVIDE TRAINING FOR OPERATION AND ASSEMBLY OF MAST CLIMBERS. VENDOR SHALL ALSO PROVIDE INSTRUCTOR TRAINING FOR OPERATION OF MAST CLIMBERS.
- MAST CLIMBERS SHALL BE DESIGNED TO A SAFETY FACTOR OF 4 TO 1 AT MAXIMUM LOAD CONDITION.
- MAST CLIMBER SHALL HAVE A MINIMUM LOAD CAPACITY OF 5000 LBS EVENLY DISTRIBUTED OVER PLATFORMS IN THE TWO TOWER CONFIGURATION, AND AT MAXIMUM SPAN LENGTH IN THE ONE TOWER CONFIGURATION.
- VENDOR SHALL PROVIDE LOAD CHARTS INCLUDING MAXIMUM LOAD CAPACITY FOR BOTH ONE AND TWO TOWER CONFIGURATIONS, AND ATTACH THE CHARTS AT OPERATION STATIONS.
- VENDOR SHALL PROVIDE ENGINEERING DATA, INCLUDING DEFLECTION ANALYSIS AND STRESS ANALYSIS OF PLATFORM AND MAST AND LOADS AT THE MAST TIE OFF POINTS UNDER MAXIMUM LOAD CONDITION IN TWO TOWER CONFIGURATION.
- REMOVABLE DECKING SHALL BE LEVEL WITH SECONDARY DECKING AND MAIN PLATFORM DECKING.
- ALL SAFETY FENCES SHALL COMPLY WITH 29 CFR 1910.23 (e).
- MAST CLIMBERS SHALL CONFORM TO ANSI/SIA A92.9.
- MAST CLIMBERS SHALL HAVE HARD STOPS AT THE TOP AND BOTTOM OF TRAVEL, IN CASE OF LIMIT SWITCH FAILURE.

90M12310

REVISION

UNLESS OTHERWISE SPECIFIED (DIMENSIONS ARE IN INCHES) (DIMENSIONS ARE IN MILLIMETERS)				DATE	
FRACTIONS	DECIMALS	ANGLES	1"	DATE	DATE
±	.XX	±	0.3	DATE	DATE
16	.XXX	±	.010	DATE	DATE
DO NOT SCALE DRAWING				DATE	DATE
LOCATION	BUILDING 4550	DATE	DATE	DATE	DATE
REVISION	LAST DETAIL SECTION OR VIEW LETTER USED	DATE	DATE	DATE	DATE
SPECIAL EQUIPMENT DESIGN BRANCH				DATE	
GEORGE C. MARSHALL SPACE FLIGHT CENTER				DATE	
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION				DATE	
Huntsville, Alabama				DATE	
DRAWING NO.	E	90M12310	DATE	DATE	DATE
SHEET	1	OF	3	DATE	DATE

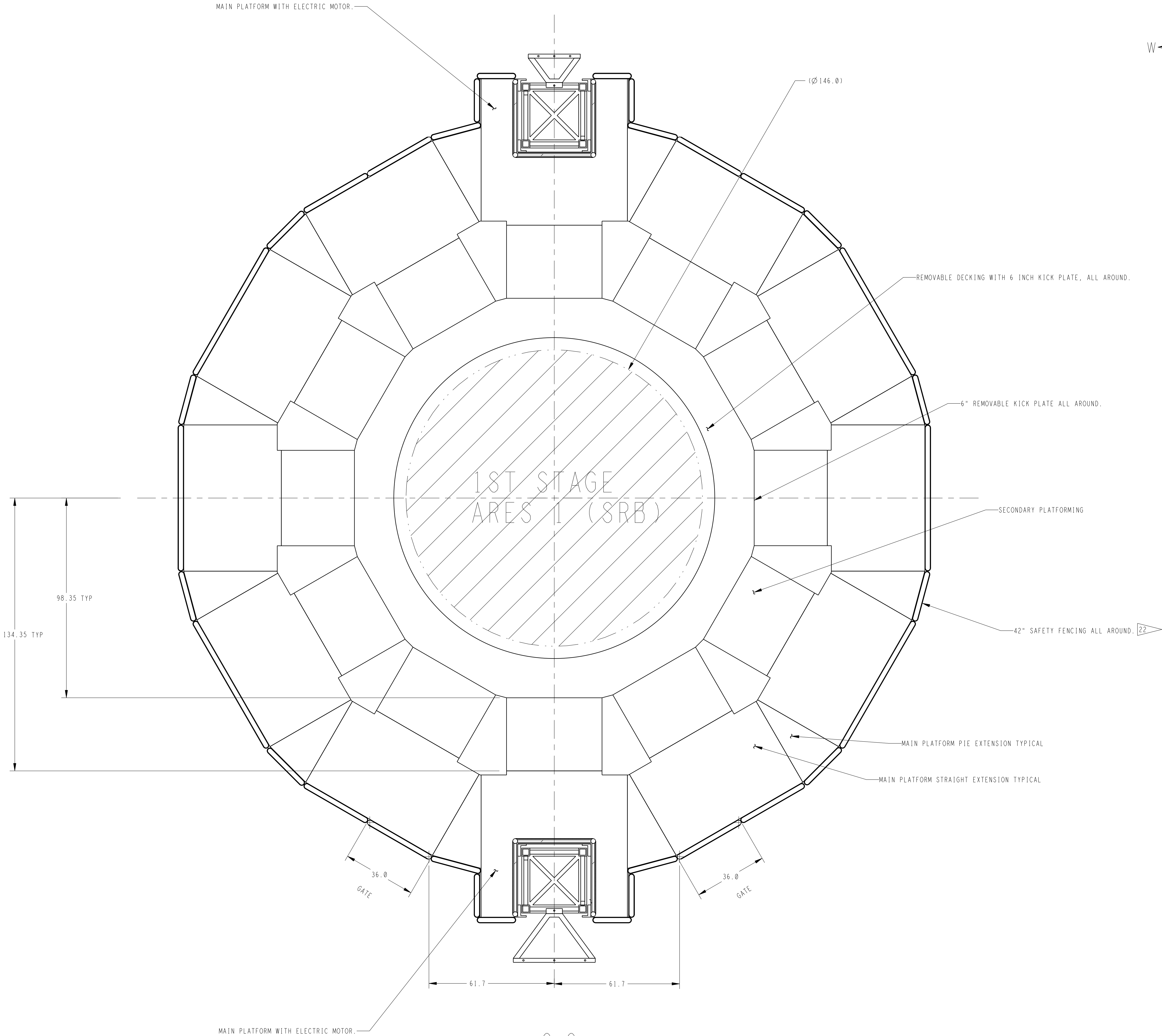
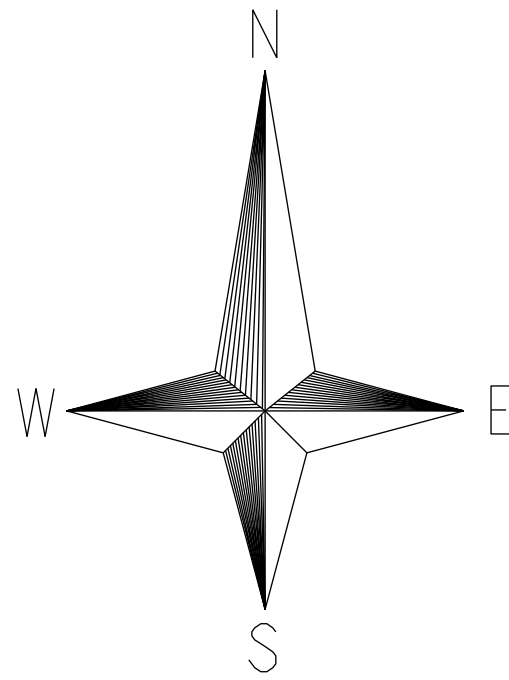
REVISIONS				
SYM	DESCRIPTION	DATE	APPROVAL	



MAST CLIMBER ASSEMBLY		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Huntsville, Alabama	
DATE	2008-05-23	OFFICE CODE	EV35
DESIGNED BY	JEFF SHEPHERD	SCALE	NOTED
DRAWING FILE #		90M12310	
SHEET		2	OF 3

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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SECTION C-C SEE SHEET 2 ROTATED 90° CCW  
SECTION D-D SEE SHEET 2 ROTATED 90° CW

2 TWO TOWER CONFIGURATION  
SCALE 1:20

90M12310  
SEE SHT 1  
REVISION

MAST CLIMBER ASSEMBLY		SPECIAL EQUIPMENT DESIGN BRANCH	
		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Huntsville, Alabama	
DATE 2008-05-23	OFFICE CODE EV35	DRAWN E	90M12310
DESIGNED BY JEFF SHEPHERD	SCALE NOTED	SHEET 3	OF 3